

CLAIMS

1. A method of creating a visually significant image using information encoding glyphs and an alphabet of glyphs, each glyph having a specified optical intensity and each glyph being adapted to encode information by the shape of the glyph, the method including the step of:

selecting and positioning the information encoding glyphs so that the bulk optical properties of an aggregate of the glyphs create the visually significant image, wherein the glyph shape defines both the optical intensity and the encoding.

2. The method as claimed in claim 1 further including creating said alphabet of glyphs.

3. A method as claimed in claim 1 wherein the information is encoded by symmetry properties of a plurality of glyphs.

4. A method as claimed in claim 1 wherein the plurality of glyphs forms a background glyph carpet.

5. A method of creating a visually significant image using information encoding glyphs and a glyph alphabet wherein each glyph is uniquely optically identifiable and has a bulk optical property, the method including the step of:

arranging at least a subset of said glyphs on a page so that in any given area, the bulk optical properties of an aggregate of said plurality of glyphs forms a visually significant image or image portion.

6. The method as claimed in claim 5 further including defining said glyph alphabet.

7. The method as claimed in claim 5 further including encoding information by using the shape of the plurality of glyphs.

8. A method as claimed in claim 3 wherein the plurality of glyphs forms a background glyph carpet.
9. A method as claimed in claim 8 wherein the background glyph carpet is adapted to encode the position of a unique location on a page within a logical page-space, the extent of which is defined by the specific encoding technique.
10. A method as claimed in claim 8 wherein the background glyph carpet is adapted to encode digital information into the visually significant image.
11. A method as claimed in claim 10 wherein the encoded digital information corresponds to data relating to the image, multimedia data, textual data or any other information which can be recorded in the background glyph carpet.
12. A method as claimed in claim 5 wherein the encoding glyphs occupying a specified portion of the visually significant image depend on the maximum or minimum optical intensity of the resulting visually significant image.
13. A method as claimed in claim 5 wherein the visually significant image incorporates an optical DC offset or greyscale shrinkage, where the minimum optical intensity of the specified portion of the visually significant image is sufficiently low as to reduce the encoding possibilities below a specified useful value, whereby the encoding space in said specified portion is increased.
14. The method as claimed in claim 13 inserting additional glyphs in said portion.
15. A method as claimed in claim 13 wherein the DC offset preferably corresponds to applying uniform grey background on the visually significant image.
16. A method as claimed in claim 12 wherein the contrast of the visually significant image is reduced, where the maxima and minima optical intensities of the visually significant image are such that insufficient encoding can be applied to any region.

17. A method as claimed in claim 5 wherein the glyphs are distinguishable by symmetry properties of the glyphs corresponding to at least one of rotation and reflection symmetry attributes.

18. A method as claimed in claim 5 further comprising causing optically dark glyphs to dominate the dark areas of the visually significant image, and optically light glyphs to dominate the encoding scheme in light areas of the visually significant image.

19. A method as claimed in claim 2 wherein the glyph alphabet is dynamically created as a function of the optical characteristics of the desired visually significant image.

20. A method as claimed in claim 19 wherein the dynamically created glyph alphabet is created so that at a specified level of optical resolution, aggregates of the glyphs at that specified level of optical resolution approximate the optical intensity distribution of the desired visually significant image.

21. A method as claimed in claim 1 wherein the glyphs are positioned so that their optical centre of gravity coincides with vertices of a grid.

22. A method as claimed in claim 5 wherein the glyphs are positioned so that their optical centre of gravity coincides with vertices of a grid.

23. An article incorporating visually significant information and encoded information generated according to the method of claim 1.

24. An article incorporating visually significant information and encoded information generated according to the method of claim 5.

25. An encoded surface having an array of glyphs applied thereon, each glyph having a specified optical intensity and each glyph encoding information by the shape of the glyph, the selection and position of the glyphs being such that the bulk optical properties of an aggregate of the glyphs creates a visually significant image, the glyph shape defining both the optical intensity and the encoding.